

WHAT IS CLAIMED IS:

1. A device for measuring electrocardiogram with tapeless format comprising:
 - a shell, shaped as a thin and long cube and having at least one operating panel;
 - at least two gelless electrodes with thin foil shape, slightly embedded and fixed in the operating panel and extended and surrounded at least one edge of the shell to a surface opposite to the operating panel;
 - at least one information display, located on the operating panel to display a plurality of measured values;
 - a calculation system, connecting with two gelless electrodes and the information display located in the shell in order to calculate relative electrical information measured from the gelless electrodes and display results on the information display.
2. The device for measuring electrocardiogram with tapeless format as described in claim 1, wherein the operating panel has at least one button to set and transfer functions.
3. The device for measuring electrocardiogram with tapeless format as described in claim 1, wherein the gelless electrodes can be made by any conductive metal.
4. The device for measuring electrocardiogram with tapeless format as described in claim 1, wherein the gelless electrodes can be made by any conductive rubber;
5. The device for measuring electrocardiogram with tapeless format as described in claim 1, wherein a plurality of information values shown on the information display include at least values of ST segment, QRS interval and heart-beat rate.
6. The device for measuring electrocardiogram with tapeless format as described in claim 1, wherein the calculation system further comprises:
 - a pre-signal amplify circuit;

an electrocardio signal amplify/filter circuit;

an analog/digital transfer circuit;

a CPU;

wherein the pre-signal amplify circuit is connected to the gelless electrodes to get relative electrical data, and continuously displays results on the information display after calculating the electrical data by means of the electrocardio signal amplify/filter circuit and the analog/digital transfer circuit and the CPU.

7. A method for measuring electrocardiogram with tapeless format comprising:

- (1) to start a tapeless electrocardiogram measuring device;
- (2) to collect relative electrical data via two roots within total four fingers of two hands touching two gelless electrodes of an operating panel of the tapeless electrocardiogram measuring device;
- (3) to identify quality for the relative electrical data, if unacceptable, then returning to step (2), otherwise going to next step;
- (4) to electrically calculate the relative electrical data with a calculation system within the tapeless electrocardiogram measuring device;
- (5) to present a plurality of information values on an information display;
- (6) to finish the method.

8. The method for measuring electrocardiogram with tapeless format as described in claim 7, wherein the gelless electrodes can be made by any conductive metal.

9. The method for measuring electrocardiogram with tapeless format as described in claim 7, wherein the gelless electrodes can be made by any conductive rubber.

10. The method for measuring electrocardiogram with tapeless format as described in claim 7, wherein the calculation system further comprises:

- a pre-signal amplify circuit;
- an electrocardio signal amplify/filter circuit;
- an analog/digital transfer circuit;
- a CPU.

11. The method for measuring electrocardiogram with tapeless format as described in claim 7, wherein, the electrical calculation by order in step (4) is detection for QRS, detection for ST and judgment of cardiac arrhythmia.

12. The method for measuring electrocardiogram with tapeless format as described in claim 7, wherein the information values displayed on the information display include at least ST segment, QRS interval and heartbeat rate.

13. A device for measuring electrocardiogram with tapeless format comprising:
a shell, shaped as a thin and long cube and having at least one operating panel;
at least two gelless electrodes, slightly embedded and fixed in the operating panel;
at least one information display, located on the operating panel to display a plurality of measured values;
a calculation system, connecting with at least the two gelless electrodes and the information display located in the shell in order to calculate relative electrical information measured from the gelless electrodes and display results on the information display.

14. The device for measuring electrocardiogram with tapeless format as described in claim 13, wherein the operating panel has at least one button to set and transfer functions.

15. The device for measuring electrocardiogram with tapeless format as described in claim 13, wherein the gelless electrodes can be made by any conductive metal.

16. The device for measuring electrocardiogram with tapeless format as described in claim 13, wherein the gelless electrodes can be made by any conductive rubber.

17. The device for measuring electrocardiogram with tapeless format as described in claim 13, wherein a plurality of information values shown on the information display include at least values of ST segment, QRS interval and heart-beat rate.

18. The device for measuring electrocardiogram with tapeless format as described in claim 13, wherein the calculation system further comprises:

- a pre-signal amplify circuit;
- an electrocardio signal amplify/filter circuit;
- an analog/digital transfer circuit;
- a CPU;

wherein the pre-signal amplify circuit is connected to the gelless electrodes to get relative electrical data, and continuously displays results on the information display after calculating the electrical data by means of the electrocardio signal amplify/filter circuit and the analog/digital transfer circuit and the CPU.

19. The device for measuring electrocardiogram with tapeless format as described in claim 13, wherein the device further comprises a cover.

20. The device for measuring electrocardiogram with tapeless format as described in claim 13, wherein the device further comprises another two gelless electrodes, slightly embedded and fixed in another surface opposite to the operating panel.

21. A method for measuring electrocardiogram with tapeless format comprising:

- (1) to start a tapeless electrocardiogram measuring device;
- (2) to collect relative electrical data via at least two finger tips of two hands touching at least two gelless electrodes of an operating panel of the tapeless electrocardiogram measuring device;

- (3) to identify quality for the relative electrical data, if unacceptable, then returning to step (2), otherwise going to next step;
- (4) to electrically calculate the relative electrical data with a calculation system within the tapeless electrocardiogram measuring device;
- (5) to present a plurality of information values on an information display on the operating panel;
- (6) to finish the method.

22. The method for measuring electrocardiogram with tapeless format as described in claim 21, wherein the gelless electrodes can be made by any conductive metal.

23. The method for measuring electrocardiogram with tapeless format as described in claim 21, wherein the gelless electrodes can be made by any conductive rubber.

24. The method for measuring electrocardiogram with tapeless format as described in claim 21, wherein the calculation system further comprises:

- a pre-signal amplify circuit;
- an electrocardio signal amplify/filter circuit;
- an analog/digital transfer circuit;
- a CPU.

25. The method for measuring electrocardiogram with tapeless format as described in claim 21, wherein, the electrical calculation by order in step (4) is detection for QRS, detection for ST and judgment of cardiac arrhythmia.

26. The method for measuring electrocardiogram with tapeless format as described in claim 21, wherein the information values displayed on the information display include at least ST segment, QRS interval and heartbeat rate.

27. The device for measuring electrocardiogram with tapeless format as described in claim 13, wherein the device can be applied on other electrical products, which can be one of the following: mobile phone, walkie-talkie, portable computer, walkman.